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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,460	12/28/2001	Pieter Tjerk Koopman	3135-011614	9480

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EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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08/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/937,460	Applicant(s) KOOPMAN, PIETER TJERK	
	Examiner SHAWN AN	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22, 24, 26, 28, 32-34, 36, 40 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22, 24, 26, 28, 32-34, 36, 40, and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/22/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The request filed on 7/22/09 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/937,460 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Remarks

2. Applicant's Remarks/argument(s) as filed 7/22/09 have been carefully considered but are moot in view of the following new ground(s) of rejection incorporating previously cited prior art references.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22, 24, 26, 28, 32-34, 36, 40, and 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiyama et al (5,190,632) in view of Liu et al (5,998,796).

Regarding claims 22, 24, and 36, Fujiyama et al discloses a device/method for selecting and recording (col. 22, lines 1-13 and lines 51-67) an image of an irradiated or emissive object comprising complexes of DNA, RNA, or protein, the improvement comprising:

an immovable (mounted to the electrophoresis unit; Fig. 1, 1) object holder (Figs. 1-2, 5) for positioning/placing the object (a sample of DNA fragments; the gel member) in a stationary position (col. 9, lines 13-48);

at least one mirror (Figs. 2 and 4, 22) is rotatable around a single rotation axis for purpose of reflecting a chosen part of the image of the object to a viewing area;

a camera (Fig. 2, 24);

a (second) drive means (Fig. 2, 30) for rotating the at least one mirror (22) about the rotation axis (which is perpendicular to an optical axis of the camera), thereby displacing the at least one mirror for selecting a part of the image while holding the object in the stationary position (col. 12, lines 34-68; col. 13, lines 1-15).

Therefore, since Fujiyama et al does disclose displacing the at least one mirror for selecting a part of the image while holding the object in the stationary position as discussed above, it would have been considered a simple arrangement/design choice to move/rearrange/reposition the mirror (after the object) such that the mirror is displaceable for selecting a part of the image from the reflected image of the object while holding the object in the stationary position just as long as the end result remains the same.

Fujiyama et al does not particularly disclose a first drive means for displacing the camera substantially parallel to a rotation axis of the at least one mirror, wherein the camera is displaceable in a viewing area in which the image of the object is reflected by the at least one mirror that lies on the optical axis of the camera.

Fujiyama et al also does not particularly disclose the drive means for rotating the at least one mirror about the rotation axis, which is perpendicular to an optical axis of the camera.

However, it is conventionally well known in the image processing art for a camera to rotate in a desired angle for an effective way of taking/capturing/sensing an image.

Furthermore, Liu et al teaches a detector system for performing sample analysis such as DNA sequencing/fingerprinting (col. 1, lines 9-16) comprising an example of camera displacement/rotation for correcting such as any skew among the received pixels in the sensed image, wherein the camera is displaceable/rotatable in a viewing area (Fig. 3b; col. 4, lines 22-49).

Moreover, a drive means for displacing the camera is considered an inherent feature, because the camera can't displace/rotate/move by itself.

Therefore, it would have been considered contentiously obvious to a person of ordinary skill in the art employing a device/method for selecting and recording an image of an irradiated or emissive object as taught by Fujiyama et al to incorporate/combine the concept of camera displacement/rotation as taught by Liu et al so that a first drive means displaces the camera substantially parallel to a rotation axis of Fujiyama et al's at least one mirror, wherein the camera is displaceable/rotatable in a viewing area in which the image of the object is reflected by Fujiyama et al's at least one mirror that lies on the optical axis of the camera, wherein the (second) drive means rotates the at least one mirror about the rotation axis, which is perpendicular to an optical axis of Liu et al's camera in order to correct such as any skew among the received pixels in the sensed image, thereby effectively taking/capturing/sensing an image.

Regarding claims 26 and 40, Fujiyama et al discloses a radiation source (Fig. 2, 21) for irradiating the object positioned by the object holder (5).

Regarding claims 28 and 42, Fujiyama et al discloses the radiation source (Fig. 2, 21) being disposed on the side of the object remote from the at least one mirror (22).

Regarding claim 32, Fujiyama et al discloses the device being provided with an at least sealed housing (Fig. 1).

Furthermore, the Examiner takes official notice that a housing such as used in Fujiyama et al's device, or the substantially the similar electrical device usually is completely sealed (radiation sealed as well) for the purpose of protection and prevention so at least the external irradiation by a radiation source does not interfere with the internal radiation source in the device.

Therefore, it would have been considered obvious to a person of skill in the art to recognize that Fujiyama et al's device being provided with an at least substantially radiation sealed housing for the purpose of protection and prevention so at least the

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external irradiation by a radiation source does not interfere with the internal radiation source in the device.

Regarding claim 33, Fujiyama et al discloses the rotatable mirror having an elongated form (22).

Regarding claim 34, it is considered an obvious feature to make Fujiyama et al's at least one rotatable mirror, rotatable axis, and a drive means for rotation of the mirror to be integral with the camera, so that the selected part of the image from the reflected image of the object is totally aligned with the rotatable mirror, rotatable axis, and the light received by the light collector (23)(via rotatable mirror, rotatable axis, and the object) is converted into electric signals by the camera, thereby providing a smooth operation by having the at least one rotatable mirror, rotatable axis, and a drive means for rotation of the mirror to be integral with the camera.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn An* whose telephone number is 571-272-7324.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/SHAWN AN/

Primary Examiner, Art Unit 2621

8/08/09